

Severe thunderstorms produced hailstones the size of tennis balls near Montreal on Thursday May 29, 1986. For more information about hail see page 3. More photographs included in the feature article on page 11B. Photo courtesy of "Le Journal de Montreal".

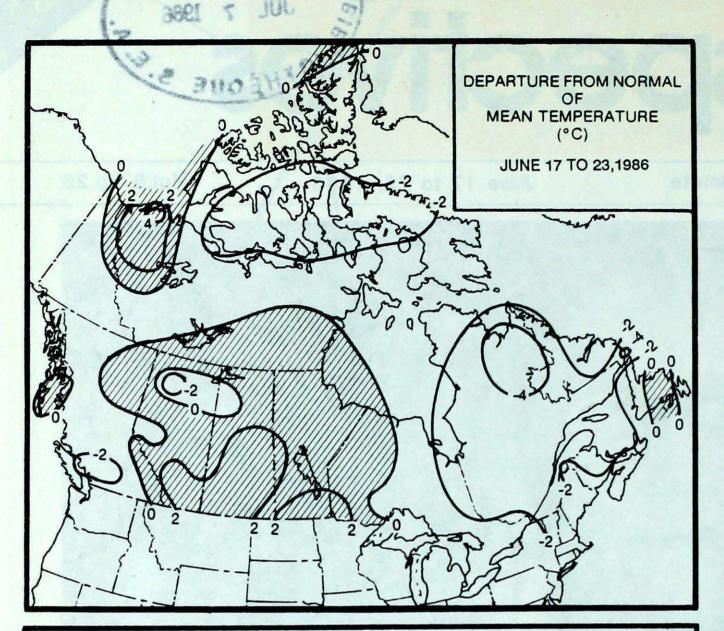
• Wet weather hampers logging in Central B.C.

- but Peace River District very dry

Tornadoes on the Prairies



TEMPERATURE



WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM					
BRITISH COLUMBIA YUKON TERRITORY NORTHWEST TERRITORIES ALBERTA	PENTICTON DAWSON FORT SMITH MEDICINE HAT	32 27 29 34	PUNTZI MOUNTAIN BURWASH DEWAR LAKES BANFF	-2 -2 -7 2				
SASKATCHEWAN MANITOBA ONTARIO QUEBEC	ROCKGLEN PORTAGE LA PRAIRIE WINDSOR BAGOT VILLE VAL D'OR	33 32	COLLINS BAY THOMPSON LONDON KUUJJUARAPIK	4 -3 -4 -3				
NEW BRUNSWICK Nova Scotia	CHATHAM GREENWOOD TRURO	29 25	ST STEPHEN SYDNEY	1				

ACROSS THE COUNTRY

Yukon and Northwest Territories

Western areas were mild with varying amounts of sun and cloud; temperatures turned cooler over the weekend. Showers and thundershowers were prevalent in some areas. Low cloud was common in the eastern and high Arctic as were periods of snow and rain. Fog and freezing drizzle was reported along the Baffin Island coastline.

British Columbia

The week was primarily unsettled and cool Showers and thunderstorms were prevalent in most districts. Some logging roads in the interior were in poor shape because of the rain. The town of Telkwa, west of Prince George, suffered severe flooding early in the week. On a positive note, the forest fire hazard remained low. Fresh snow fell on the Salmo-Creston pass in the Kootenays. It became windy in the northeast. This hampered crop spraying in the Peace River District, where grains were doing poorly because of the lack of moisture.

Prairie Provinces

5

-2

CHARLOTTETOWN

BADGER

After a cool start, record warm weather moved into the Prairies by mid-week, with readings climbing into the thirties. An area of low pressure moved across the region on June 18 and 19, touching off severe thunderstorms in many central and southern districts. Many locations were hit with marble to golf ball sized hail, and were buffetted by storm gusts to 100 km/h. Funnel clouds were sighted over Saskatoon on June 18, and a tornado touched down later in the day. Early on the morning of the 19th there were many reports of wind damage near Edmonton, and a tornado was sighted near High Prairie. The same morning at Regina Airport a tornado damaged and spun planes around on the tarmack. Tornado damage was also reported 10 km southwest of Regina. The weekend saw a return to sunny and cooler conditions.

PRINCE EDWARD ISLAND NEWFOUNDLAND

ACROSS THE NATION

SUMMERSIDE 24

GOOSE 30

WARMEST MEAN TEMPERATURE	20	WINDSOR	ONT
		WINNIPEG INT'L	MAN
COOLEST MEAN TEMPERATURE	-2	DEWAR LAKES	NWT

PRECIPITATION

Ontario

The week began cool and dry, but became progressively more unsettled towards the weekend. Frost occurred in northern Ontario. Several 24-hour precipitation records were broken across the province on June 19, when thunderstorms produced between 30 to 45 millimetres of rain; hail fell at Sudbury and Tavistock. Heavy thunderstorms once again rolled across Ontario on Sunday, preceeded by a record warm, humid airmass. Hail and funnel clouds were reported in southwestern Ontario. The storms produced locally heavy downpours and gusty winds, which toppled trees and knocked down high voltage lines, leaving several communities in the south without power.

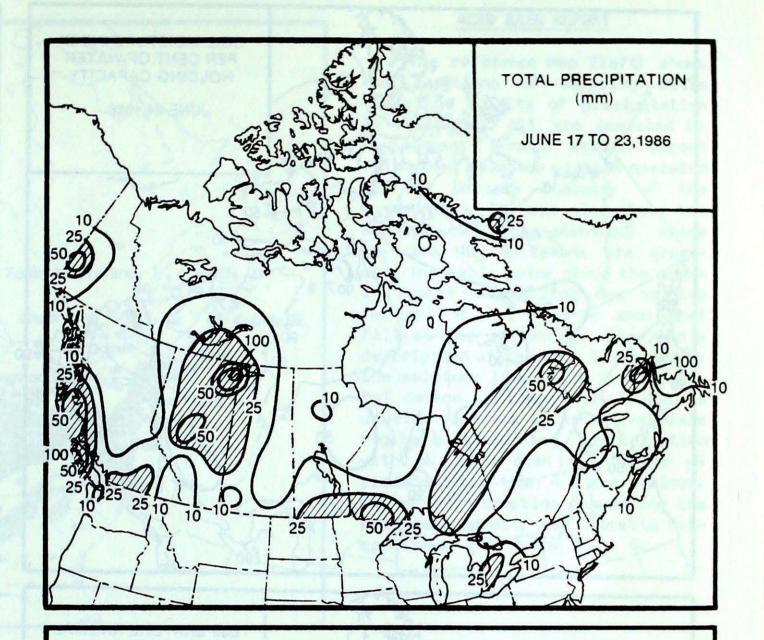
Footnote: The tornado which crossed Ontario's Haliburton District on June 16 caused approximately \$4 million damage, including the destruction of more than 100 cottages and houses.

Quebec

A cool Arctic airmass encompassed the province in the wake of an active cold front, which triggered severe thunderstorms on June 16. More than twenty daily low temperature records were broken this week. Under mainly surny skies, farmers in the south were able to finish bringing in the first hay crop. In the north, it was cloudy, with a mixture of rain and snow.

Atlantic Provinces

Although the weather in the Maritimes started off on the cool side, there was a considerable amount of sunshine. Frost occurred in northwestern New Brunswick. On June 16, intense thunderstorms moved across the Hartland area of New Brunswick. Downpours and strong winds uprooted trees and damaged vegetable fields. In Newfoundland, thundershowers gave way to a relatively fair week. The weather in Labrador was cool, with significant amounts of precipitation, consisting of snow in the north and west. Ten new forest fires were reported on the Island. One fire destroyed a sawmill on the west coast.



HEAVIEST WEEKLY PRECIPITATION (mm)

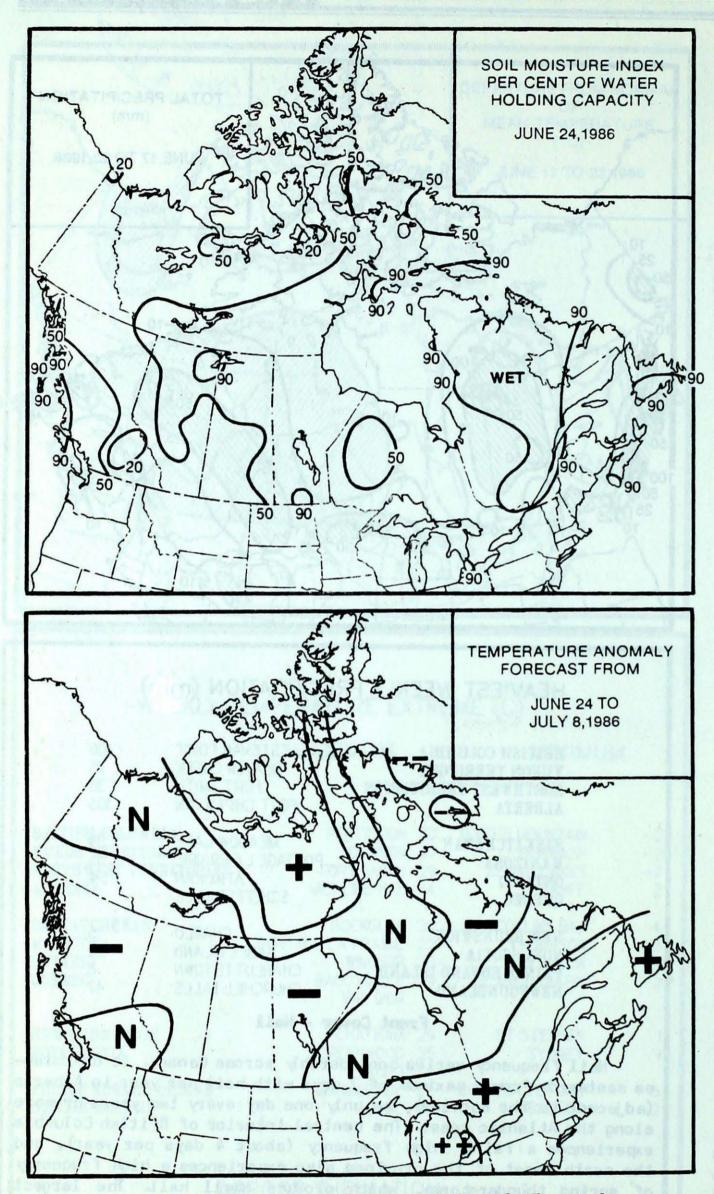
BRITISH COLUMBIA	ESTEVAN POINT	106
YUKON TERRITORY	BEAVER CREEK	75
NORTHWEST TERRITORIES	FORT SMITH	36
ALBERTA	FORT CHIPEWYAN	105
SASKATCHEWAN	MEADOW LAKE	39
MANITOBA	PORTAGE LA PRAIRIE	35
ONTARIO	ATIKOKAN	54
QUEBEC	SCHEFFERVILLE	71
NEW BRUNSWICK	CHARLO	15
NOVA SCOTIA	SABLE ISLAND	33
PRINCE EDWARD ISLAND	CHARLOTTETOWN	8
NEWFOUNDLAND	CHURCHILL FALLS	47

Front Cover - Hail

Hail frequency varies considerably across Canada. It diminishes eastwards from a maximum of 7 days with hail per year in Alberta (adjacent to the Rockies), to only one day every two years or more along the Atlantic coast. The central interior of British Columbia experiences a fairly high frequency (about 4 days per year), and the north coast of the province also experiences a high frequency of spring thunderstorms, which produce small hail. The largest hailstone documented in Canada fell at Cedoux, Saskatchewan, in August 1973, weighed 290 grams, and was as large as a large grape-fruit. Reports of golf-ball sized hail are relatively common, and every year hail the size of tennis balls can be expected somewhere in Canada from the Rockies to New Brunswick. The large hailstone featured on the front cover fell near Montreal, Québec, on May 29, 1986. (for more detail see page 11B).

3A

ACID RAIN



CLIMATIC PERSPECTIVES VOLUME 8

Managing Editor	M.J. Newark
Editor (English)	A.K. Radomski
Editor (French)	A.A. Caillet
Staff Writer	M. Skarpathiotakis
Art Layout	K. Czaja
Cartography	G. Young/T. Chivers
19.79-1697 F1977A	B. Taylor
Word Processing	U. Ellis, P. Burke

Regional Correspondents

Atl.: F.Amirault; Que.: J.Miron Central: B.Tortorelli;

Ont.: A.Radecki; Western: W.Prusak; Pac.: R.McLaren; Yukon Weather Centre; Frobisher Bay Weather Office; Yellowknife Weather Office; Newfoundland Weather Centre: George MacMillan; Ice Central Ottawa; AES Satellite Data Lab

ISSN 0225-5707 UDC 551.506.1(71)

Climatic Perspectives is a weekly bilingual publication of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ont. Canada M3H 5T4. Phone (416)667-4906/4711.

The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socioeconomic impact.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. The contents may be reprinted freely with proper credit.

The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service

Temperature Anomaly Forecast

++ much above normal
+ above normal
N normal
- below normal
-- much below normal

This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

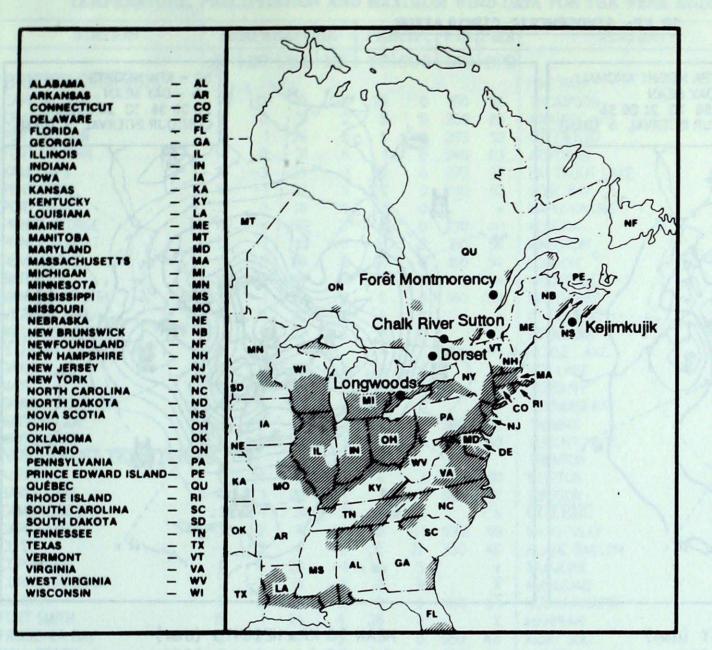
Annual Subscriptions Weekly issue including

monthly supplement: Monthly issue only:

Subscription enquiries: Supply and Services Canada, Publishing Centre, Ottawa, Ontario, Canada, KIA 059. Phone (613)994-1495

\$35.00

\$10.00



ACID RAIN

ACID RAIN REPORT

The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where SO₂ and NO₂ emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the rain or snow that fell at the collection sites and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

				JUNE 15 TO JUNE 21, 1986	
SITE	DAY	pH	AMOUNT	AIR PATH TO SITE	
Longwoods	16	4.7	l(r)	Kentucky, Indiana, Southern Ontario	
Dorset	16	4.4	25(r)	Ohio, Southern Ontario	
	19	4.4	8(r)	Northern Michigan, Central Ontario	
	21	3.8	1(r)	Michigan, Southern Ontario	
Chalk River	16	4.7	9(r)	Southern Ontario	
	19	4.4	2(r)	Northern Ontario, Central Ontario	
	21	3.9	2(r)	Michigan, Soutern Ontario,	

Sutton153.71(r)Ohio, Pennsylvania, New York164.314(r)Virginia, Pennsylvania, New York

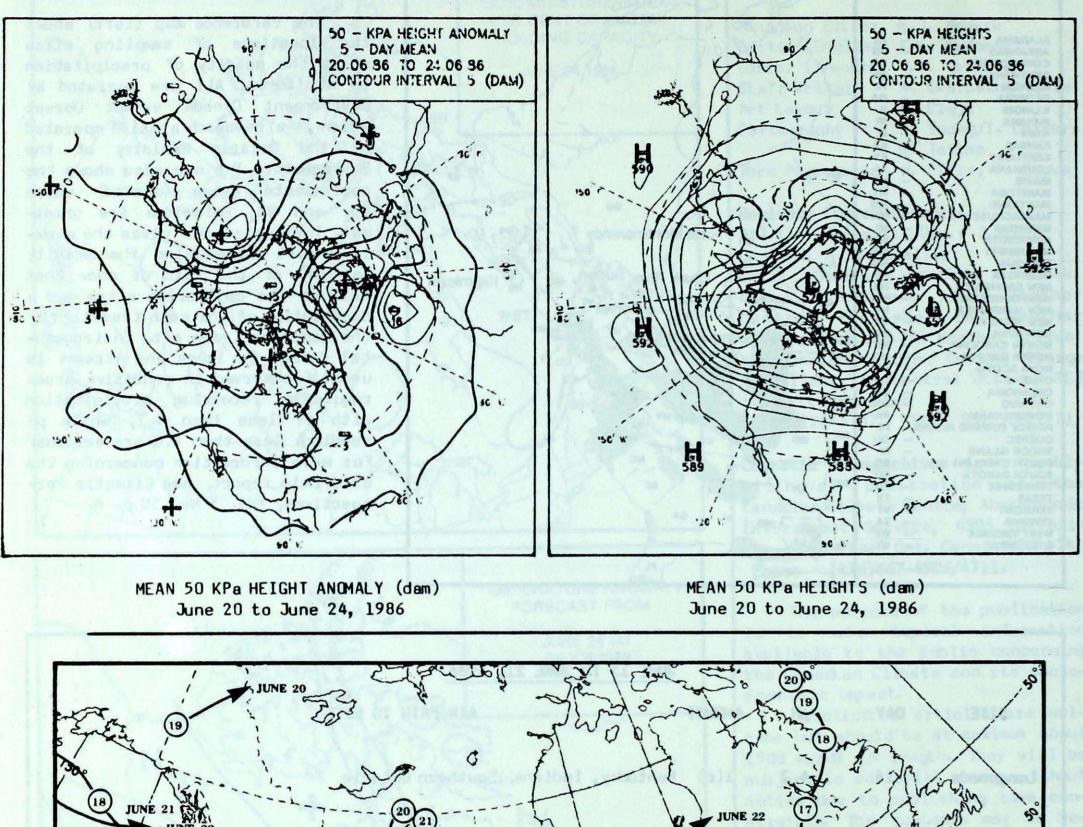
Montmorency 16 4.4 44(r) New York, Southern Quebec

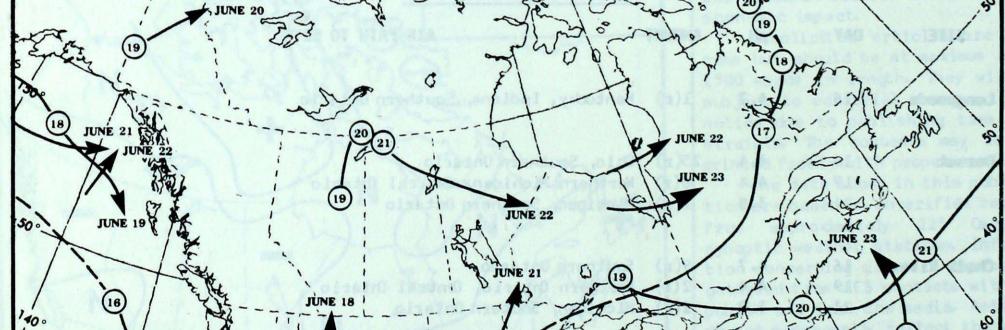
Kejimkujik163.817(r)Virginia, New Jersey, Atlantic Ocean204.38(r)New York, Massachusetts, Atlantic Ocean

r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).

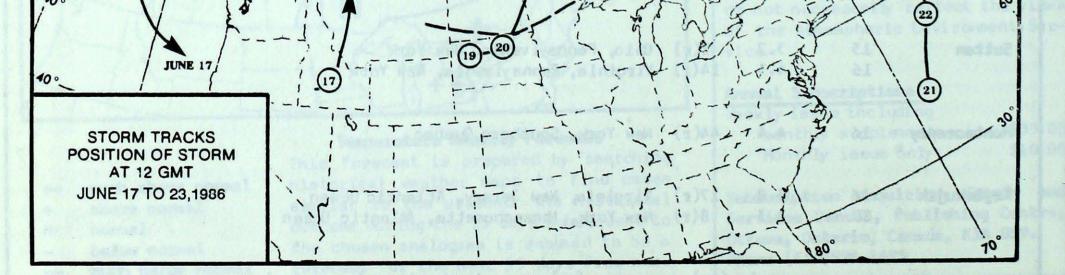
CIRCULATION

50 KPa ATMOSPHERIC CIRCULATION





6A



7A

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT JUNE 24,1986

Intrinsit AV IDP MXI INP ISO DIR SPD INV INV IDP SO DIR SPD CARE STAMUS 16 0 17 2 0 5 0 200 63 200 70 66 67 7 40 400 50 200 74 60 60 50 600 50 600 50 600 50 600 70 60 70 60 70 60 70 400 400 70	-	STATION	TEMPERATURE			PRECIP. WIND MX				STATION		TEMPERATURE				PRECIP.		WIND MX	
BRITISH COLUMEIA CARABROK IF OP 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P 6 P<	ł	and the stand in the second			-		There are a series			-									
CAPE STAMES IPP OP PS O D O D <thd< th=""> D <thd< th=""> D</thd<></thd<>			AV	, DI	MAA	, with 1	I	500	DIK	ISED									
CAMBROOK 16 0 3 2 5 0 260 5 VMCPC INT. 20 3 8 2 0			11P	OP	16	9P	29	0	150	56									
FORT STUCHN H 0 0 6 1 0 240 63 Amiconant 16 2 0 54 0 000 65 Part Mathematic 100 000 <				0		2	5	0											
KAMADOPS 16 -3 28 1 5 0 00 00 65 PRITICION 18 -3 25 0 00 13 5 0 00 00 65 PRITICION 18 0 77 0 00 56 00 56 00 56 00 56 00 56 00 56 00 56 00 56 00 56 40 00000h 100 70				1		5	5												
PRIMICION 18 -1 32 5 27 0 100 50 Comparison Fear of the second secon				0		6	1												
PORT PRICE GORGE IP No * PARSARANC IP 25 -1 38 0 20 25 -1 38 0 20 25 -1 38 0 200 25 -1 38 0 20 25 -1 38 0 20 25 -1 38 0 250 -1 38 0 250 41 0 10 -1 23 -1 38 0 250 41 0 10 -1 20 38 0 350 <td></td> <td></td> <td></td> <td></td> <td></td> <td>5</td> <td></td>						5													
PRINCE GRORE IP * IP									010					A COLORADO			10 M		
Revel.stoke 5 -2 29 8 41 0 160 54 (DOROM 177 177 -2 21 4 300 53 VANCOVER NTL 15 -1 22 2 1 0 10 0 37 0 74 0 37 0 74 0 37 0 74 0 37 0 74 0 37 0 77 13 5 0 0 300 35 0 300 30 50 5 5 0 X PECALELACE H 0 253 38 0 300 40 77 75 0 70 <td></td> <td></td> <td></td> <td>*</td> <td></td> <td>2P</td> <td></td> <td>0</td> <td></td> <td>41</td> <td>a second s</td> <td></td> <td></td> <td></td> <td>9</td> <td></td> <td></td> <td></td> <td></td>				*		2P		0		41	a second s				9				
SMMERS IP PP PP AP IP PP PP AP III O Te VACCOVER INTL 14 0 22 7 4 0 7 0071MAR NTL 17 -1 26 7 5 0 X VACCOVER INTL 14 0 22 7 4 0 7 0071MAR NTL 17 -26 7 5 0 X VACCOVER INTL 14 0 22 7 4 0 X PETALWAR 16 12 3 18 0 300 50 X VACCOVER INTERTITOR 1 25 5 5 5 0 + 4 0 300 50 X VACCOVER INTERTITOR 1 0 5 -3 3 200 64 0 10 0 X VARTON 75 -3 6 0 X VARTON 75 10 <td></td> <td></td> <td></td> <td>1</td> <td></td>				1															
VANCOUVER INTL 15 -1 22 8 11 0 40 37 VICTORA INTL 14 0 227 1 3 2 1 4 0 227 1 3 5 0 X VILCAN ETERTTORY 13 22 4 2 0 X PETMAWAR 15 -2 31 3 5 0 X VILCAN ETERTTORY 14 0 25 5 0 X SUBJURY EP -7 2 0 300 56 VICTORA INTL 4 0 25 7 0 40 5 -3 3 30 56 1 4 0 300 56 VICTORA INTL 17 -2 2 7 0 40 5 -3 3 18 0 20 10 30 58 30 50 27 0 20 30 30 58 30 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>- 1</td> <td>160</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>a martine a</td> <td></td> <td></td>								- 1	160								a martine a		
VICTORIA NTL II 0 22 7 4 0 * 0TTAWA APTL 7 1 28 7 5 0 X VILLANS LAKE 13 5 0 X PECKE LAKE 14 0 25 3 15 0 X PCIAE LAKE 16 1 7 4 21 0 300 48 MAYO 14 0 26 15 0 X SUBBURY 16 1 74 21 0 300 48 MAYON 14 0 26 15 0 X SUBBURY 16 17 71 12 74 21 0 300 48 MURDINGE 1 0 23 7 0 300 46 71 71 71 72 74 74 74 74 74 74 74 74 74 74 74 74 75 75 76 74 74 74 74 74 76 74 74									140		and the second		10 To 10		-4		100		
WILLANG LAVE VIKON TERRITORY 13 • 22 4 2 0 X PETMAWA 15 2 1 3 5 0 X DAVGON 14 * 27 2 6 0 * PEDLAVE 16 0 25 17 0 300 56 SWALE PORTA 8 1 20 0 37 0 20 17 0 200 17 0 200 17 0 200 10 28 SWALE PORTA 8 1 20 0 37 0 200 10 28 10 0 0 10 30 58 100 30 58 100 28 10 0 60 37 10 100 50 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10				-	22	7									ż			500	
DAVISON 14 * 27 2 2 6 0 * DED LACE 15 1 27 4 21 0 300 4E SHINGLE POINT A 8 1 20 0 39 0 * THUNDER BAY 16 0 25 2 14 0 300 4E SHINGLE POINT A 8 1 20 -1 23 27 0 340 45 THUNDER BAY 14 0 25 1 0 00		WILLIAMS LAKE	13	*	22	4	2	0		X		15	-2	(examined		5	0		Х
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			14		~	-							0				1. Dia		
SHINGLE POINT A B 1 20 0 $*$ THUNDER BAY 1 0 25 2 1 0 300 70 0 100 60 70 70 100 70 70 100 70 70 100 70 70 100 70						5							1 1D					300	
WATESOR LAKE 1 2 2 7 0 3/40 46 TMMMIS 1 -3 2 6 1 0 30 6 0 30 6 0 30 6 0 30 6 30 6 1 0 30 5 -3 4 3 20 6 1 0 5 -3 6 6 0 30 5 -3 6 6 0 30 5 -7 0 10 0 5 -7 0 10 0 0 30 5 -7 0 10 0<			8	1							the second s							300	
WHERENCE: 11 -2 22 3 7 0 12 24 33 7 0 12 13 7 0 12 13 7 0 12 13 13 13 13 13 13 13 13 13 13 13 13 14 13 13 14 13 13 14 13 13 14 13 13 16 13 10 10 15 13 10 20 15 14 CARE TORE -1 -1 -3 3 6 6 00 75 14 75 13 10 10 55 14 10 <		WATSON LAKE	12		23	2	7		340	S									
ALERT 1 0 5 -1 10 0 5 -1 10 6 8 0 X CAMBROGE BAY 2 -1 11 -3 3 8 * QUEDEC 200 0P 0P 30P 11P 27 0 200 5X CAMB OVER -22 -2 -6 -5 35 17 090 6P Activity 4 -1 1 -2 520 0 X CUPE -1 -3 4 -4 16 37 304 48 BLANC SABION 8 * 20 2 0 30 39 39 0 800 39 20 0 30 39 39 30 10 10 10 10 11 10 10 40 30 10 10 10 44 36 0 20 10 10 10 40 20 20 20 20 20 20 20 20 20 20 20 20 <td></td> <td></td> <td>11</td> <td>-2</td> <td>22</td> <td>3</td> <td>7</td> <td>0</td> <td>120</td> <td>63</td> <td></td> <td>17</td> <td></td> <td>32</td> <td></td> <td>14</td> <td></td> <td></td> <td>52</td>			11	-2	22	3	7	0	120	63		17		32		14			52
BAKE 6 1 20 -1 1 0 060 37 WINDSOR 200 0.9 200 0.0 0.9 200 0.9 200 0.9 200 0.9 200 0.9 200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			10	0	F			2	220	00						10 10 1 1 1 1			
CAME DYER 2 -1 TI -3 3 8 CUE Los Los <thlos< th=""> Los <thlos< th=""></thlos<></thlos<>			6	1			4			200303 C				11 WHI 14 200 STILL				280	
CAPE DYER -2 -2 4 -6 35 72 09 69 EACOTVLLE 14 -3 29 3 18 0 260 83 COPERNINE 6 * 20 -1 0 5 * NUKUAK 4 -1 11 -2 1 0 550 39 COPERNINE 6 * 20 -2 0 -3 0 90 64 -4 -4 -7 29 3 18 0 200 63 COMERNA 2 -2 2 -2 6 -2 2 0 100 64 -4 -4 -2 28 2 20 04 43 0 200 61 30 30 44 45 35 0 200 61 30 30 44 45 35 0 200 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70 70			2	-1		USA V	3		000	Sector 1		201	UP	JZP	11P	27	0	200	54
COPERAINSE 6 * 20 -1 0 5 * UNULUAR 4 -1 11 -2 11 0 05 03 04 04 14 -2 28 2 0 03 03 04 44 -1 17 -2 17 0 05 04 MAINARA 14 -2 28 2 0 20 03 04 44 -1 17 -2 17 0 20 03 04 44 -2 28 27 0 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 <t< td=""><td></td><td></td><td>-2</td><td></td><td>4</td><td>-6</td><td>35</td><td>121</td><td></td><td>69</td><td>BAGOTVILLE</td><td>14</td><td>-3</td><td></td><td></td><td></td><td>0</td><td>260</td><td>83</td></t<>			-2		4	-6	35	121		69	BAGOTVILLE	14	-3				0	260	83
CORAL HARBOUR 2 -2 10 -3 0 y x KULLUAQ 4P -5P 1D -1P 20 0 00 65 FORT SMITH 15 1 29 4 36 0 X MANIWARI 4P -2P 2P 0 100 44 FORT SMITH 16 1 29 4 36 0 X MANIWARI 4P -2 28 4 17 0 240 43 FROBSHER BAY 3 -2 7 2 7 0 050 44 MONTRALINTL 17 -2 28 4 10 220 10 100 70 RESOUTE -1 -2 2 -5 2 10 03 54 X SUFFFILES 10P -9P 18 9P -20 10 0 200 72 32 0 10 200 72 20 00 <td></td> <td></td> <td>-1</td> <td></td> <td></td> <td>LUC IL MAR</td> <td></td> <td></td> <td>330</td> <td>U S 17 11 16</td> <td></td> <td>8</td> <td></td> <td></td> <td></td> <td>52</td> <td></td> <td></td> <td></td>			-1			LUC IL MAR			330	U S 17 11 16		8				52			
EUREXA 2 -2 6 -2 2 0 60 63 KUUUUUUARAPK 40 -10 190 -30 13 5 190 44 FROBESER BAY 3 -2 7 -2 7 0 050 44 MONT AULI 14 -2 28 4 10 240 102 MALL BEACH 0 -2 3 -6 # 18 350 43 MONTREAL INTL 17 -2 27 8 5 0 290 43 MOUT BEAL INTL 17 -2 27 8 6 0 X CHEFTERVILE 6 -4 9 -2 1 0 X SCHEFTERVILE 6 -4 9 -2 1 0 X SCHEFTERVILE 6 -4 9 -2 1 0 X SCHEFTERVILE 6 -4 9 -2 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6			and the second of				513 22		4	2.00			1			000000000000000000000000000000000000000
FORT SMITH 15 1 29 4 36 0 X MANNARD 14 -2 28 2 0 200 43 FR0BSHER BAY 3 -2 7 -2 7 -2 7 0 050 44 MONT JOLI 14 -2 28 2 0 200 43 RNDRSHER BAY 3 -2 7 -2 7 -2 7 0 200 61 MONT JOLI 14 -2 28 4 17 0 240 100 7 0 200 61 MONT JOLI 14 -2 28 2 3 0 41 0 7 0 0 200 100 7 0 000 70 10 0 200 70 5 SEPERFORULE 6 -4 19 -2 10 0 200 70 200 70 200 70 200 70 200 70 200 70 200 70 70 200 70 70 200<			2			ALL			160	HIMPE STATISTICS							12 10 39		
FROBSHER BAY 3 -2 7 -2 7 0 050 644 MONT JOLI 14 -2 28 4 17 0 240 102 NULL BEACH 0 -2 3 -6 1 20 0 650 0 270 65 NULL BAY 2P 0P 6P -2P P 5 X OUBBAY B -4 16 3 5 0 270 65 NORMAN WELLS 1B 2 27 8 6 0 X CHEFERVILLE 6 -4 19 -7 10 0 000 70 70 0 0 000 70 70 0 0 000 70 70 0 0 000 70 70 0 0 200 0 200 55 X 0UBBAY 70 0 200 0 200 55 10 00 200 70 0 200 70 0 200 70 0 200 70			15	ī					100	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									11100000010100000000000000000000000000
NUVK 14 2 2 0 X NATASHQUAN 8 -4 16 3 5 0 200 65 MOULD BAY 2P 0P 6P -2P P 5 X QUEBC 15 -3 26 3 4 0 260 76 RESOLUTE -1 -2 2 -5 2 4 210 59 SEPT-ILES 100 X SUBERGOKE 14 -3 27 1 0 0 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 70 0.00 70 70 0.00 70 70 0.00 70 70 0.00 70 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70 0.00 70			3		7	-2		0		44									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
MOULD BAY 2P 0P 6P -2P TP 5 X OUEBEC 15 -3 20 3 4 0 200 76 NORMAN WELLS 1B 2 27 8 6 0 X SCHEFFERVILLE 6 -4 19 -2 71 0 300 70 SACIS HARBOUR 3 0 14 -3 1 0 X SCHEFFERVILLE 6 -4 -3 27 1 7 0 200 70 SACIS HARBOUR 3 0 14 -3 1 0 X SHERBROKE 14 -3 27 1 7 0 200 72 ALLERTA 77 2 37 9 20 0 230 66 CHARLO 13 -3 24 3 15 0 200 72 COLLAKE 17 2 27 9 20 0 230 66 CHARLO 14 -3 29 30 0 200 720<			0			-6			350	and the second second		and the second second		11 1 10 10 10		5			and service of
NORMAN WELLS 1B 2 27 B 6 0 X SCHEPTERVILLE 6 -4 19 -2 71 0 300 70 RESOLUTE -1 -2 2 -5 2 4 210 59 SEPT-ILES 100 -39 10 0 220 70 3.00 70 SACIS HARBOUR 3 0 14 -3 10 X SHERROXKE 14 -3 27 17 0 230 65 ALBERTA 10 27 9 20 0 230 65 CHARLO 13 -3 24 3 15 0 290 72 COLD LAKE 17 2 71 6 23 0 200 65 CHARLO 13 -3 24 3 15 0 200 72 COLD LAKE 17 27 9 20 230 65 CHARLO 14 -3 27 9 20 70 50 70 70 70						-2P				The second second second						5			All 100000000000000000000000000000000000
RESOLUTE -1 -2 2 -5 2 4 210 59 SEPT-ILES IOP -3P 1BP 3P 10 0 20 70 SACHS HARBOUR 3 0 14 -3 1 0 X SHERBROOKE 14 -3 27 1 7 0 220 70 ALBERTA 7 2 27 9 20 0 200 65 CHARLO 13 -3 24 3 15 0 290 76 CALGARY INTL 17 3 31 7 2 0 200 65 CHARLO 13 -3 24 3 15 0 290 76 CODLAKE 17 2 277 9 20 0 230 60 70 290 70 200 70 70 280 72 72 92 90 230 70 70 70 70 70 70 70 70 70 70 70 70 70	1000			111 11 115									1 Factor and the second			4			111111111111111111111111111111111111111
SACHS HARBOUR 3 0 14 -3 1 0 X SHERBOOKE 14 -3 27 1 7 0 290 52 ALBERTA 7 3 31 7 2 0 000 54 VAL DOR 12 -3 29 0 10 0 320 65 CALGAY INTL 7 3 31 7 2 0 200 65 CHARLO 13 -3 24 3 15 0 290 76 CONDATION 77 2 27 9 20 0 300 66 FREDERICTON 14 -3 27 3 2 0 200 76 CONDATION NAMAO 77 1 27 6 230 8 290 0 X SAIT JOHN 14P -2P 25P 4P 2P 0 200 61 200 51 72 25 4 0 250 65 YAIT JOHN 14P 0 25 33 0 200 </td <td></td> <td>RESOLUTE</td> <td>-1</td> <td></td> <td></td> <td>100 C 100 C 100</td> <td></td> <td></td> <td>210</td> <td>and a strength of the</td> <td></td> <td>a share a start a</td> <td></td> <td></td> <td></td> <td></td> <td>V. Statement</td> <td></td> <td>1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1</td>		RESOLUTE	-1			100 C 100			210	and a strength of the		a share a start a					V. Statement		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
ALBERTA NEW DRUNSWICK Iz Color Distance Dis			3	100		A CONTRACTOR OF	1			11 Same 2 & 4 (1)					1	7	at a state	290	
CALGARY INTL 17 3 31 7 2 0 200 85 CHARLO 13 -3 24 3 15 0 290 76 COLD LAKE 17 2 27 9 20 0 200 65 CHARLO 13 -3 24 3 15 0 290 76 COLD LAKE 17 2 277 9 20 0 300 70 CHARLO 14 -3 29 3 0P 0 280 67 CONDATION 17 1 27 6 23 0 300 70 MONCTON 14 -3 27 29 0 270 57 FORT MCMURRAY 16 2 30 300 40 NOVA SCOTIA SAINT JOHN 14P 0 21 8 0 290 54 MEDICINE HAT 19 234 7 16 0 200 93 GREENWADD 14 0 21 8 8 0 290			13	-1	24	6	22	0	030	54		12	-3	29	0	10	0	320	65
COLD LAKE 17 2 27 9 20 0 230 65 CHARHAM 14 -3 29 3 0P 0 280 72 CORONATION T7P 2P 29P 4P 21 0 360 61 FREERICTON 14 -3 27 3 2 0 280 77 CORONATION T7P 2P 29P 4P 21 0 360 61 FREERICTON 14 -3 27 3 2 0 280 77 FORT MCMURRAY 16 2 30 8 29 0 X SAINT JOHN 14P 0P 23P 3P 6 0 290 61 MEDICINE HAT 19 2 34 7 16 0 250 69 SYDNEY 12 -2 24 1 5 0 190 63 VENCINE HAT 19 2 34 7 16 0 250 69 SYDNEY 12 -2 24 1			17	3	31	7	2	0	200	85		12	-2	24	3	15	0	200	76
CORONATION TP 2P						9		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		CONTRACT VERSION OF CONTRACT									
FORT MCMURRAY 16 2 30 8 29 0 X SAINT JOHN 14P 0P 23P 3P 6 0 290 61 MIGH LEVEL 13 -2 25 2 43 0 300 46 NOVA SCOTIA NOVA SCOTIA JASPER 14 1 24 5 10 0 X GREENWOOD 15 -2 25 4 17 0 280 89 LETHBRIDGE 18 2 32 5 4 0 240 74 SHEARWATER 14 0 21 8 8 0 290 65 MEDICINE HAT 19 2 34 7 16 0 250 65 YARMOUTH 14 0 25 8 33 0 230 65 SASKATCHEWAN 18 2 30 8 18 0 340 63 SUMMERSIDE 15 -1 23 5 8 0 160 46 SUMMERSIDE 11 1			17P	2P	29P	11 14 14 14 14				100000							1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		and a second
HIGH LEVEL 13 -2 25 2 43 0 300 46 NOVA SCOTIA MASPER 14 1 24 5 10 0 X LETHBROE 18 2 32 5 4 0 240 74 SHEARWATER 14 0 21 8 8 0 290 54 LETHBROE 18 2 32 5 4 0 210 74 SHEARWATER 14 0 21 8 8 0 290 54 PEACE RIVER 16 2 25 7 14 0 210 93 0 230 65 STONEY 12 -2 24 15 0 190 63 SASKATCHEWAN CREE LAN 18 2 30 8 18 0 340 63 SUMMERSIDE 15 -1 23 5 8 0 180 340 63 SUMMERSIDE 15 -1 24 8 4 0 260 61				1		100 C			300										
JASPER1412451005701000 TMLETHBRICGE1823254024074SHEARWATER1402188029054MEDICINE HAT19234716025065STDINEY12-22415019063SASKATCHEWAN16225714021093CHARLOTTETOWN15-12358018046SASKATCHEWAN18230818034063SUMMERSIDE15-12358018046LA RONGE1732.992025056NEWFOUNDLAND15-12484026061LA RONGE1732.992025056NEWFOUNDLAND11125320019056SASKATOON18232718031093CHURCHILL FALLS9-324-147012059YORKTON18231823029093ST JOHN'S14127111022076MITTOBA18231823029093ST JOHN'S14127									200	and the second		14P	OP	23P	3P	6	0	290	61
LETHBRIDGE1823254024074SHEARWATER1402188029054MEDICINE HAT19234716025069SYDNEY12-22415019063SASKATCHEWAN16225714025065FRINCE EDWARD ISLAND14025833023065CREE LAKE14-127614021093CHARLOTTETOWN15-12358018046ESTEVAN18230818034063SUMMERSIDE15-12358018046CAR NORE17332780220100CARTWRIGHT11125320019056SASKATOON182325130XGANDER INTL14026544020067VORKTON1823165027070600SE1303036022076MIET CURRENT1823182302707070600SE1303036022076MIET CURRENT18231823027				-2					300	BUILT STOLEN		15	-7	75	4	17	0	780	89
MEDICINE HAT 19 2 34 7 16 0 250 69 SYDNEY 12 -2 24 1 5 0 190 63 PEACE RIVER 16 2 25 7 14 0 250 65 YARMOUTH 14 0 25 8 33 0 230 65 SASKATCHEWAN 18 2 30 8 18 0 340 63 SUMMERSIDE 15 -1 23 5 8 0 180 46 CREGINA 19 3 32 7 8 0 240 63 SUMMERSIDE 15 -1 23 8 0 180 46 SASKATOON 18 2 32 7 8 0 270 700 CARTWRIGHT 11 1 25 3 20 0 190 56 SASKATOON 18 2 31 6 5 0 270 70 GANDER INTL 14 0 26 4				2		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			240	and the second									Contraction of the second s
SASKATCHEWAN Initial Construction Initial	131 2			2		7			250	69	SYDNEY	12	-2	24	1	5	0	190	63
CREE LAKE 14 -1 27 6 14 0 210 93 CHARLOTTETOWN 15 -1 23 5 8 0 180 46 ESTEVAN 18 2 30 8 18 0 340 63 SUMMERSIDE 15 -1 24 8 4 0 260 61 LA RONGE 17 3 29 9 22 0 250 56 NEWFOUNDLAND 7 7 7 7 8 0 260 61 SASKATOON 18 2 32 7 18 0 310 93 CHURCHILL FALLS 9 -3 24 -1 47 0 120 59 SASKATOON 18 2 31 6 5 0 270 70 GOOSE 13 0 30 3 6 0 200 67 YORKTON 18 2 31 8 23 0 290 93 ST JOHN'S 14 1 27 1 </td <td></td> <td></td> <td>16</td> <td>2</td> <td>25</td> <td>7</td> <td>14</td> <td>0</td> <td>250</td> <td>65</td> <td></td> <td>14</td> <td>0</td> <td>25</td> <td>8</td> <td>33</td> <td>0</td> <td>230</td> <td>65</td>			16	2	25	7	14	0	250	65		14	0	25	8	33	0	230	65
ESTEVAN 18 2 30 8 18 0 340 63 SUMMERSUE 15 -1 24 8 4 0 260 61 LA RONGE 17 3 29 9 22 0 250 56 NEW FOUNDLAND 15 -1 24 8 4 0 260 61 NEW FOUNDLAND CARTWRIGHT 11 1 25 3 20 0 190 56 SASKATOON 18 2 32 7 18 0 310 93 CHURCHIL FALL 9 -3 24 -1 47 0 120 59 SWIFT CURRENT 18 2 32 5 13 0 X GOSE 13 0 30 3 6 200 50 70 600 70 70 100 3 6 200 70 70 100 30 3 6 200 70 70 100 30 3 6 200 70 70			14	-1	27	6	14	0	210	93		15	-1	23	5	8	0	180	46
LA RONGE 17 3 29 9 22 0 250 56 NEWFOUNDLAND REGINA 19 3 32 7 8 0 220 100 CARTWRIGHT 11 1 25 3 20 0 190 56 SASKATOON 18 2 32 7 18 0 310 93 CHURCHILL FALLS 9 -3 24 -1 47 0 120 59 SWIFT CURRENT 18 2 32 5 13 0 X GANDER INTL 14 0 26 5 4 0 200 67 YORKTON 18 2 31 6 5 0 270 70 GOOSE 13 0 30 3 6 0 260 56 MANITOBA BRANDON 18 2 31 8 23 0 290 93 ST JOHN'S 14 1 27 1 10 220 76 CHURCHILL 10 3		ESTEVAN								122									
SASKATOON 18 2 32 7 18 0 310 93 CHURCHILL FALLS 9 -3 24 -1 47 0 120 59 SWIFT CURRENT 18 2 32 5 13 0 X GANDER INTL 14 0 26 5 4 0 200 67 YORKTON 18 2 31 6 5 0 270 70 GOOSE 13 0 30 3 6 0 260 56 MANITOBA 7 18 2 31 6 5 0 270 70 GOOSE 13 0 30 3 6 0 260 56 MANITOBA 7 18 2 31 8 23 0 290 93 ST JOHN'S 14 1 27 1 11 0 220 76 CHURCHILL 10 3 27 0 5 0 100 70 ST LAWRENCE 9 0 16				3	29	9	22		250	56	NEWFOUNDLAND								
SWIFT CURRENT182325130XGANDER INT'L1402654020067YORKTON1823165027070GOOSE1303036026056MANITOBA18231823029093STGOOSE1303036026056MANITOBA18231823029093STJOHN'S141277111022076BRANDON18231823029093ST JOHN'S141277111022076CHURCHILL1032705010070ST LAWRENCE90162240XLYNN LAKE1522724023065MABUSH LAKE8-422022031074AV = weekly extreme maximum temperature in degree CDIR= direction of maximum wind speed (deg. from true north)SPD = maximum wind speed in km/hourVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV <td></td> <td></td> <td></td> <td>3</td> <td></td> <td>7</td> <td></td> <td></td> <td></td> <td>and the second second</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				3		7				and the second second			1						
YORKTON1823165027070GOOSE1303036026056MANITOBABRANDON18231823029093ST0163P7018074BRANDON18231823029093ST14127111022076CHURCHILL1032705010070STLAWRENCE90162240XLYNN LAKE1522724023065WABUSH LAKE8-422022031074AV = weekly extreme maximum temperature in degree CMX = weekly extreme minimum temperature in degree CMANULY HAKE8-422022031074DIR = direction of maximum wind speed in km/hourX = not observedP = value based on less than 7 days				2		5			310	A CONTRACTOR OF		1.			1 S				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
MANITOBA BRANDON1823182302909397018074BRANDON18231823029093STJOHN'S14127111022076CHURCHILL1032705010070STJAWRENCE90162240XLYNN LAKE1522724023065WABUSH LAKE8-422022031074AV = weekly extreme maximum temperature in degree CMX = weekly extreme minimum temperature in degree CDIR = direction of maximum wind speed (deg. from true north)MN = weekly total precipitation in mmDP = departure of mean temperature from normal in degree CDIR = not observedY = not observedDP = departure of mean temperature from normal in degree CP = value based on less than 7 daysY = not observed		YORKTON		2					270	100 C 100 C 100 C							III SALE		100
BRANDON 18 2 31 8 23 0 290 93 ST JOHN'S 14 1 27 1 11 0 220 76 CHURCHILL 10 3 27 0 5 0 100 70 ST JOHN'S 14 1 27 1 11 0 220 76 LYNN LAKE 15 2 27 2 4 0 230 65 ST LAWRENCE 9 0 16 2 24 0 X MX = weekly extreme maximum temperature in degree C MX = weekly extreme minimum temperature in degree C DIR = direction of maximum wind speed (deg. from true north) SPD = maximum wind speed in km/hour X = not observed X = not observed X = not observed P = value based on less than 7 days													Contraction of the second			7			
LYNN LAKE 15 2 27 2 4 0 230 65 WABUSH LAKE 8 -4 22 0 22 0 310 74 AV = weekly mean temperature in degree C MX = weekly extreme maximum temperature in degree C DIR = direction of maximum wind speed (deg. from true north) SPD = maximum wind speed in km/hour MN = weekly total precipitation in mm DP = departure of mean temperature from normal in degree C X = not observed Y = value based on less than 7 days											ST JOHN'S		1	27	1				
AV = weekly mean temperature in degree C MX = weekly extreme maximum temperature in degree C MN = weekly extreme minimum temperature in degree C TP = weekly total precipitation in mm DP = departure of mean temperature from normal in degree C P = value based on less than 7 days				3						1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1								210	
MX = weekly extreme maximum temperature in degree C MN = weekly extreme minimum temperature in degree C TP = weekly total precipitation in mm DP = departure of mean temperature from normal in degree C P = value based on less than 7 days			G	2	21	2	4	0	230	65	WABUSH LAKE	8	-4	22	0	22	0	310	14
MN = weekly extreme minimum temperature in degree C TP = weekly total precipitation in mm DP = departure of mean temperature from normal in degree C P = value based on less than 7 days		AV = weekly mean temp	erati	ure in	deg	ree C					DIR = direction of maximu	um w	vind s	peed	(deg	. fron	n tru	e nor	th
P = weekly total precipitation in mm $ X = not observed $ $ P = departure of mean temperature from normal in degree C P = value based on less than 7 days$		MN = weekly extreme mo	nim	um te	empe	ratur	e in e	degre	e C		SPD = maximum wind speed in km/hour								
DP = departure of mean temperature from normal in degree C $P =$ value based on less than 7 days		TP = weekly total precipit	ation	ninn	npel	ature	in d	egree	.C		X = not observed								
SOG = snow depth on ground in cm, last day of the period * = missing		DP = departure of mean	tem	peral	ture f	irom i	Jarn	nal in	deore	Pe C		ban	7 day	US.					
		SOG = snow depth on an	ound	l in cr	n la	st day	of	the r	prior					y5					
	L	and apprivation gre			.,	at doy	0	uie f	enoc	1	+ - missing		8 ⁴ 11 15 81					Sec.	